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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/656,085	09/06/2000	Jerome Cros	2809.1	8870

5514 7590 10/15/2002

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EXAMINER

TAMAI, KARL I

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 10/15/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/656,085

Applicant(s)

CROS ET AL. 

Examiner

Tamai IE Karl

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 5-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 15-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Election/Restrictions

1. This application contains claims 5-14 drawn to an invention nonelected with traverse in Paper No. 9. A complete reply to the final rejection must include cancelation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Drawings

2. The objections the drawings under 37 CFR 1.83(a) are withdrawn.
3. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on 7/30/02 have been approved.

Claim Rejections - 35 USC § 112

4. The rejection of Claims 1-4 and 15-28 under 35 U.S.C. 112, second paragraph, is withdrawn.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claims 1, 3, and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Klein (US 4,329,610). Klein teaches a rotor teeth forming 12 coil slots and 24 commutator bars. The teeth having a plurality of coils having which are connected to different commutator bars. It is inherent that the stator has at least 2P poles(a north and south). Klein teaches the laminated rotor is conventional. The examiner takes Official Notice that a conventional lamination is ferromagnetic. The terminals of each of the coils are connected to different commutator sections as well as the plurality of coils are connected to different commutator sections. The examiner notes that the preamble does not carry patentable weight in the claims.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2, 15, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein, in further view of Ward (US 5,121,021). Klein teaches every aspect of the invention except the motor having a permanent magnet stator with a magnetic core and the magnetic circuit having a metal powder. Ward teaches a permanent magnet motor with a soft magnetic core for supporting permanent magnets. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Klein with the permanent magnet stator of Ward to provide a field magnet for the motor with reduce eddy current losses.

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9. Claims 16 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein and Ward, in further view of Wong et al. (Wong) (US 5,304,885). Klein and Ward teach every aspect of the invention except the center part of the rotor/stator teeth having rounded edges. Wong teaches rotor poles with rounded edges. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Klein and Ward with rounded edges on the rotor poles because Wong teaches rounded edges improves airflow and prevents carbon dust build up.

10. Claims 17-19 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein and Ward, in further view of Case et al. (Case) (US 3,095,515). Klein and Ward teach every aspect of the invention, except the poles having the same axial length as the coil with the tips being axially longer, and the commutator extending under the tips. Case teaches the tips 48, 50 axially longer than the poles with the commutator 54 extending under the tips to allow for electrical connection with the coils. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Klein and Ward with the commutator and poles of Case to provide a small motor.

11. Claims 20 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein and Ward, in further view of Katagiri (US 5,949,172). Klein and Ward teach every aspect of the invention, except the skew pole tips on unskewed teeth. Katagiri teaches skewed pole tips in figures 10a and 10b on unskewed teeth. It would have

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been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Klein and Ward with the commutator and poles of skewed poles of Katagiri to prevent cogging.

12. Claims 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klein, in further view of Tanaka et al. (Tanaka) (US 6,057,626). Klein and Ward teach every aspect of the invention, except the equalizer connected to the commutator. Tanaka teaches an equalizer to connect segments with the same potential. It would have been obvious to a person of ordinary skill in the art at the time of the invention to construct the motor of Klein with the equalizer on the commutator to connect segments of the same potential.

Response to Arguments

13. Applicant's arguments filed 7/30/02 have been fully considered but they are not persuasive. The Applicant's arguments that the Klein does not teach a simple coil is not persuasive. Klein teaches a coiled wire with two ends, therefore it reads on a simple coil. The Applicant's argument that Klein teaches overlapping, lap winding is not persuasive. Klein figure 3, clearly shows the phase windings extending around the rotor poles and connected to different coils, therefore the windings are simple coils. The Applicant has not claimed the coils being wound around a single pole nor has the Applicant claimed the windings are non-overlapping. The Applicant's argument that Klein does not teach the windings wound on the same rotor tooth is not persuasive. Klein figure 2 clearly shows that windings W3b and W1b are wound around the same

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poles, and they are connected to separate commutator sections. The rejection is proper and maintained.

Conclusion

14. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl I.E. Tamai whose telephone number is (703) 305-7066. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist at (703) 308-0956.

Karl I Tamai
PRIMARY PATENT EXAMINER
October 14, 2002


KARL TAMAI
PRIMARY EXAMINER